## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claims 1-28. (Cancelled)

29. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, which comprises treating the compound of formula III:

wherein n = 0 or 1.

in cyclohexane with a  $C_1$  -  $C_4$  -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

30. (New): The process according to claim 29, wherein the salt is hydrochloride or hydroiodide salt.

 (New): The process according to claim 29, wherein the compound of the formula III used is the compound IIIa;

- 32. (New): The process according to claim 29, wherein the  $C_1$   $C_4$  alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.
- 33. (New): The process according to claim 32, wherein the C<sub>1</sub> C<sub>4</sub> alkanol is isopropyl alcohol.
- 34. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, which comprises treating the compound of formula III:

wherein n = 0 or 1,

in cyclohexane with a C1 - C4 -alkanol or water to remove silyl protecting groups, optionally

converting to the salt of the compound of formula II.

- 35. (New): The process according to claim 34, wherein the salt is hydrochloride or hydroiodide salt.
- 36. (New): The process according to claim 34, wherein the compound of the formula III used is the compound IIIa:

- 37. (New): The process according to claim 34, wherein the  $C_1$   $C_4$  alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.
- 38. (New): The process according to claim 37, wherein the  $C_1$   $C_4$  alkanol is isopropyl alcohol.
- 39. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, which comprises treating the compound of formula III:

wherein n = 0 or 1.

in cyclohexane with a  $C_1$  -  $C_4$  -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 40. (New): The process according to claim 39, wherein the salt is hydrochloride or hydroiodide salt.
- (New): The process according to claim 39, wherein the compound of the formula III used is the compound IIIa;

- 42. (New): The process according to claim 39, wherein the C<sub>1</sub> C<sub>4</sub> alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.
- 43. (New): The process according to claim 42, wherein the C1 C4 alkanol is isopropyl alcohol.
- 44. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, comprising the steps of:

a) reacting the compound of formula IV:

wherein n = 0 or 1,

in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1,

and

- (b) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub> -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 45. (New): The process according to claim 44, wherein the conversion into the salt in step (b) is carried out by treating the compound of formula II with hydrochloric acid or hydroiodic acid.
- 46. (New): The process according to claim 44, wherein the compound of formula IV used is the compound IVa:

$$(CH_2)_3SiHN$$
 $N$ 
 $CH_2I$ 
 $CO_2Si(CH_3)_3$ 

to obtain the compound formula IIIa:

$$(CH_3)_3SIHN \\ N \\ CH_2 \\ N \\ CH_2 \\ N \\ IIIa$$

47. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, comprising the steps of:

b) reacting the compound of formula IV:

wherein n = 0 or 1,

in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1,

and

- (c) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub> -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 48. (New): The process according to claim 47, wherein the conversion into the salt in step (b) is carried out by treating the compound of formula II with hydrochloric acid or hydroiodic acid.
- 49. (New): The process according to claim 47, wherein the compound of formula IV used is the compound IVa:

to obtain the compound formula IIIa:

50. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, comprising the steps of:

c) reacting the compound of formula IV:

wherein n = 0 or 1,

in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1,

and

- (d) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub> -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 51. (New): The process according to claim 50, wherein the conversion into the salt in step (b) is carried out by treating the compound of formula II with hydrochloric acid or hydroiodic acid.

52. (New): The process according to claim 50, wherein the compound of formula IV used is the compound IVa:

to obtain the compound formula IIIa:

53. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, comprising the steps of:

a) reacting the compound of formula V:

wherein n = 0 or 1,

in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula IV:

wherein n = 0 or 1,

 d) reacting the compound of formula IV in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1.

and

- (e) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub> -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 54. (New): The process according to claim 53, wherein the salt is hydrochloride or hydroiodide salt.

## 55. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, comprising the steps of:

## a) reacting the compound of formula V:

wherein n = 0 or 1.

in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula IV:

wherein n = 0 or 1.

e) reacting the compound of formula IV in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

Page 12 of 37

wherein n = 0 or 1,

and

- (f) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub> -alkanol or water to remove silvl protecting groups, optionally converting to the salt of the compound of formula II.
- 56. (New): The process according to claim 55, wherein the salt is hydrochloride or hydroiodide salt.
- 57. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, comprising the steps of:

a) reacting the compound of formula V:

wherein n = 0 or 1,

in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula IV:

wherein n = 0 or 1,

 f) reacting the compound of formula IV in cyclohexane with N-methylpyrrolidine to produce the compound of formula III:

wherein n = 0 or 1,

and

- (g) treating the compound of formula III in cyclohexane with a C<sub>1</sub> C<sub>4</sub>-alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.
- 58. (New): The process according to claim 57, wherein the salt is hydrochloride or hydroiodide salt.
- 59. (New): The process according to claim 57, wherein the compound of the formula V used is the compound Va;

60. (New): A process for the preparation of the compound of formula I(i) or I(ii):

$$H_2N$$
 $CO_2H$ 
 $CO_2H$ 

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, comprising the steps of:

a) treating the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound of formula VI and catalytic amount of trimethylsilyl iodide to produce the compound of formula V:

wherein n = 0 or 1,

 b) treating the compound of formula V in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V to produce the compound of formula IV:

wherein n = 0 or 1,

c) reacting the compound of formula IV in cyclohexane with  $[[Z^*]]$  Z or HZ to produce the compound of formula III(i) or with Z to produce the compound of formula IIII(ii):

$$(CH_3)_3SI(OCO)_nHN \\ - CH_2 \\ - CO_2SI(CH_3)_3 \\ III(I) \\ III(I)$$

wherein n = 0 or 1,

$$Z^+$$
 is  $-N^-$ ,  $-N^-$ ,  $N_5$ ,  $N_6$  or  $-N^-$ 

and

Z is

$$-s = \bigvee_{\substack{N-N \\ CH_3}}^{N-N} , -s = \bigvee_{\substack{S}}^{N-N} CH_3 , -s = \bigvee_{\substack{N-N \\ CH_3}}^{N-N} -s = \bigvee_{\substack{N-N \\ CH_3CO_2H}}^{N-N} or -s = \bigvee_{\substack{N-N \\ CH_3CO_2H}}^{N-N}$$

- (h) treating the compound of formula III(i) or III(ii) in cyclohexane with a C<sub>1</sub> C<sub>4</sub>-alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula I(i) or I(ii).
- 61. (New): The process according to claim 60, wherein the compound produced in step (c) is III(i) wherein Z<sup>+</sup> is

and n = 0.

- 62. (New): The process according to claim 60, wherein the salt is hydrochloride or hydroiodide salt.
- 63. (New): The process according to claim 62, wherein the compound of the formula V used is the compound Va;

64. (New): A process for the preparation of the compound of formula I(i) or I(ii):

$$H_2N$$
 $CO_2H$ 
 $CO_2H$ 
 $CI$ 
 $I(I)$ 
 $I(II)$ 

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, comprising the steps of:

a) treating the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound of formula VI and catalytic amount of trimethylsilyl iodide to produce the compound of formula V:

wherein n = 0 or 1.

b) treating the compound of formula V in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V to produce the compound of formula IV:

wherein n = 0 or 1,

c) reacting the compound of formula IV in cyclohexane with [[Z\*]] Z or HZ to produce the compound of formula III(i) or with Z to produce the compound of formula IIII(ii):

$$(\operatorname{CH}_3)_5 \operatorname{Si}(\operatorname{OCO})_n \operatorname{HN} \xrightarrow{\hspace{1cm} \operatorname{CH}_2 - z} \operatorname{CO}_2 \operatorname{Si}(\operatorname{CH}_3)_3 \times \operatorname{CH}_2 \xrightarrow{\hspace{1cm} \operatorname{CH}_2 - z} \operatorname{CO}_2 \operatorname{Si}(\operatorname{CH}_3)_3 \times \operatorname{CH}_2 \xrightarrow{\hspace{1cm} \operatorname{CH}_3 - z} \operatorname{CO}_2 \operatorname{Si}(\operatorname{CH}_3)_3 \times \operatorname{CH}_3 \xrightarrow{\hspace{1cm} \operatorname{CH}_3 - z} \operatorname{CO}_2 \operatorname{Si}(\operatorname{CH}_3)_3 \times \operatorname{CH}_3 \xrightarrow{\hspace{1cm} \operatorname{CH}_3 - z} \operatorname{CO}_2 \operatorname{Si}(\operatorname{CH}_3)_3 \times \operatorname{CH}_3 \xrightarrow{\hspace{1cm} \operatorname{CH}_3 - z} \operatorname{CH}_3 \xrightarrow{\hspace{1cm} \operatorname{CH}_$$

wherein n = 0 or 1,

$$Z^+$$
 is  $-N^-$ ,  $N^-$ ,  $N^-$  or  $N^-$  or  $N^-$ 

and

Z is

$$-s = \bigvee_{\substack{N=N\\CH_3}}^{N-N}, \quad -s = \bigvee_{\substack{N=N\\CH_3}}^{N-N} \subset CH_3, \quad -s = \bigvee_{\substack{N=N\\CH_3CO_2H}}^{N-N} \subset CH_3CO_2H$$

- (i) treating the compound of formula III(i) or III(ii) in cyclohexane with a C<sub>1</sub> C<sub>4</sub>-alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula I(i) or I(ii).
- 65. (New): The process according to claim 64, wherein the compound produced in step (c) is III(i) wherein Z<sup>+</sup> is

and n = 0.

- 66. (New): The process according to claim 64, wherein the salt is hydrochloride or hydroiodide salt.
- 67. (New): The process according to claim 66, wherein the compound of the formula V used is the compound Va;

Page 20 of 37

68. (New): A process for the preparation of the compound of formula I(i) or I(ii):

$$H_2N$$
 $CO_2H$ 
 $CO_2H$ 

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, comprising the steps of:

a) treating the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound of formula VI and catalytic amount of trimethylsilyl iodide to produce the compound of formula V:

wherein n = 0 or 1,

b) treating the compound of formula V in cyclohexane with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V to produce the compound of formula IV:

$$(\operatorname{CH_3})_3\operatorname{Si}(\operatorname{OCO})_n\operatorname{HIN} \longrightarrow \operatorname{S}$$
 
$$\operatorname{CH_2I}$$
 
$$\operatorname{CO}_2\operatorname{Si}(\operatorname{CH}_3)_3$$

wherein n = 0 or 1,

 reacting the compound of formula IV in cyclohexane with [[Z]] Z or HZ to produce the compound of formula III(i) or with Z to produce the compound of formula IIII(ii):

wherein n = 0 or 1,

$$-N^{2}$$
,  $-N^{2}$ ,  $-N^{2}$ ,  $+N^{2}$  or  $-N^{2}$ 

and Z is

- treating the compound of formula III(i) or III(ii) in cyclohexane with a C<sub>1</sub> C<sub>4</sub>-alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula I(i) or I(ii).
- 69. (New): The process according to claim 68, wherein the compound produced in step (c) is III(i) wherein Z<sup>+</sup> is

and n = 0.

70. (New): The process according to claim 68, wherein the salt is hydrochloride or hydroiodide salt.

71. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

$$(CH_3)_3Si(OCO)_nHN$$
  $CH_2OCOCH_3$   $CO_2Si(CH_3)_3$ 

wherein n = 0 or 1.

in cyclohexane with at least one equivalent of N-methylpyrrolidine then with at least one

equivalent of trimethylsilyl iodide per equivalent of compound of formula V, followed by treatment with a  $C_1$  -  $C_4$  - alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 72. (New): The process according to claim 71, wherein the salt is hydrochloride or hydroiodide salt
- 73. (New): The process according to claim 71, wherein the compound of the formula V used is the compound Va;

74. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

wherein n = 0 or 1.

in cyclohexane with at least one equivalent of N-methylpyrrolidine then with at least one

equivalent of trimethylsilyl iodide per equivalent of compound of formula V, followed by treatment with a  $C_1$  -  $C_4$  - alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

75. (New): The process according to claim 74, wherein the salt is hydrochloride or hydroiodide salt

76. (New): The process according to claim 74, wherein the compound of the formula V used is the compound Va;

77. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

wherein n = 0 or 1.

in cyclohexane with at least one equivalent of N-methylpyrrolidine then with at least one equivalent of trimethylsilyl iodide per equivalent of compound of formula V, followed by treatment with a  $C_1$  -  $C_4$  - alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

78. (New): The process according to claim 77, wherein the salt is hydrochloride or hydroiodide salt.

79. (New): The process according to claim 77, wherein the compound of the formula V used is the compound Va;

$$(\operatorname{CH_3})_3 \operatorname{SiHN} \longrightarrow \operatorname{S} \\ \operatorname{CH_2OCOCH_3} \\ \operatorname{CO_2Si(CH_3)_3}$$

80. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

wherein n = 0 or 1, in cyclohexane with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 81. (New): The process according to claim 80, wherein the salt is hydrochloride or hydroiodide salt.
- 82. (New): The process according to claim 81, wherein the compound of the formula V used is the compound Va;

83. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

wherein n = 0 or 1, in cyclohexane with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 84. (New): The process according to claim 83, wherein the salt is hydrochloride or hydroiodide salt.
- 85. (New): The process according to claim 83, wherein the compound of the formula V used is the compound Va;

86. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula V:

wherein n = 0 or 1, in cyclohexane with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

87. (New): The process according to claim 86, wherein the salt is hydrochloride or hydroiodide salt.

88. (New): The process according to claim 86, wherein the compound of the formula V used is the compound Va;

89. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 10% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound VI and then with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- (New): The process according to claim 89, wherein the salt is hydrochloride or hydroiodide salt.
- 91. (New): The process according to claim 89, wherein the reaction with the compound VII is carried out in the presence of trimethylsilyl iodide.
- 92. (New): The process according to claim 89, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amounts of imidazole and acetamide.
- 93. (New): The process according to claim 89, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amount of trimethylsilyliodide.
- 94. (New): The process according to claim 89, wherein the C<sub>1</sub> C<sub>4</sub> alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.
- 95. (New): The process according to claim 94, wherein the C<sub>1</sub> C<sub>4</sub> alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.

96. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 3% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound VI and then with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

- 97. (New): The process according to claim 96, wherein the salt is hydrochloride or hydroiodide salt.
- 98. (New): The process according to claim 96, wherein the reaction with the compound VII is carried out in the presence of trimethylsilyl iodide.
- 99. (New): The process according to claim 96, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amounts of imidazole and acetamide.

100. (New): The process according to claim 96, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amount of trimethylsilyliodide.

101. (New): The process according to claim 96, wherein the C<sub>1</sub> - C<sub>4</sub> - alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.

102. (New): The process according to claim 101, wherein the  $C_1$  -  $C_4$  - alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.

103. (New): A process for the preparation of the compound of formula II:

or a salt thereof, wherein the compound comprises less than about 0.4% of the  $\Delta^2$  isomer, which comprises treating a solution of the compound of formula VI:

in cyclohexane with at least one equivalent of hexamethyldisilazane per equivalent of compound VI and then with the compound of formula VII:

in cyclohexane, followed by treatment with a  $C_1$  -  $C_4$ -alkanol or water to remove silyl protecting groups, optionally converting to the salt of the compound of formula II.

104. (New): The process according to claim 103, wherein the salt is hydrochloride or hydroiodide salt.

105. (New): The process according to claim 103, wherein the reaction with the compound VII is carried out in the presence of trimethylsilyl iodide.

106. (New): The process according to claim 103, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amounts of imidazole and acetamide.

107. (New): The process according to claim 103, wherein the reaction with hexamethyldisilazane is carried out in the presence of the catalytic amount of trimethylsilyliodide.

108. (New): The process according to claim 103, wherein the  $C_1$  -  $C_4$  - alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.

109. (New): The process according to claim 103, wherein the C<sub>1</sub> - C<sub>4</sub> - alkanol is selected from the group consisting of isopropyl alcohol, methanol and ethanol.

110. (New): The process according to claim 44, wherein the compound of formula IV used is the compound IVa:

to obtain the compound formula IIIa:

$$(CH_3)_3SiHN \longrightarrow S \qquad I^- \qquad \qquad IIIa$$

$$CO_2Si(CH_3)_3$$